



Technology Infusion

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TST Meeting at ARC

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Earth Science Technology Office



What is Technology Infusion?

Technology Infusion is the process of taking activities which lead to new and lower-cost scientific missions and investigations, and ensuring their availability to the Earth Science user community.

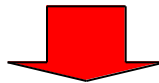
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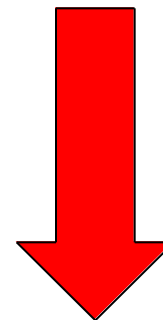
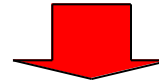
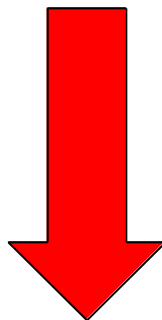


Technology Infusion Flow Diagram

Earth Science Goals



Internal/External Technology Development Programs



- Aerosol Profiles
- Cloud Profiles
- Earth Remote Sensing from L1
- Forest Canopy Measurements
- Ice Sheet Topography
- Land Surface Topography
- Ocean Surface Topography
- Ozone Mapping
- Stratospheric and Tropospheric Chemistry
- Total and UV Solar Irradiance

Enabling ES Measurements



Technology Infusion Strategy

- **Annual Technology Conference**
 - Serves as a key element of the technology infusion process by disseminating information concerning ES technology investments to the NASA community
 - Scheduled for August 29-30 at the University of Maryland Conferencing Center
- **Annual Report**
 - A technology publication describing a promising array of Earth Science technologies in the IIP, AIST, and ATI technology development programs
- **Mission Formulation Teams**
 - Active participation in the formulation of new Earth Science Missions
 - Identify technology challenges
 - Provide technology solutions
- **Technology Websites for the Earth Science Enterprise**
 - ESTO will further make technology investment information available to the end user customer through the use of the NASA Earth Science Enterprise Technology Integrated Planning Systems (TIPS).
 - This databases will be made available on the ESTO homepage at <http://esto.gsfc.nasa.gov>.
 - This website is updated regularly to provide the latest information available.

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Maturity, Risk, and Availability

- **Technology Maturity**
 - The maturity of ESTO technologies range from TRL 3 to TRL 6
- **Retiring Risks**
 - ESTO plans to retire technology risks by validating the technologies in various testbed programs such as, aircraft balloon, shuttle programs
- **Availability to Industry**
 - Earth Science instrument, platform, and advanced information systems technologies will be :
 - transferred to aerospace companies
 - incorporated in systems that can be made commercially available to NASA



ESTO Roles and Responsibilities for Technology Infusion

ESTO Responsibility

Investments in ESE Technologies -

Controlled by annual IIP, AIST, and ATI NRA process and established technology partnerships

Technology Descriptions and Maturity-

Described in Annual Conference, Annual Report and TIPS database

Technologies Available for Infusion -

Identified in the TIPS database

Not an ESTO Responsibility

Commercialization - ESTO is not responsible for the commercialization of new technology, instead new technologies are infused into the aerospace industry

Hardware and Software Deliverables -

ESTO is not the customer of hardware and software deliverables

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